

Upon entry of this amendment, the following changes shall be incorporated into the specification with regard to the Claims in the pending application:

AMENDMENTS TO THE CLAIMS

Claims 1- 79 (withdrawn)

Claim 80. (new): A method of sampling a multi-phase fluid stream comprising the steps of:

sampling, with a sampling probe, a portion of the fluid stream;
measuring the flow rate Q_s of said sampled portion; and

measuring, independently of the sampling step, the total flow rate Q of the fluid stream,

wherein the flow rate of the sampled portion is controlled according to the ratio of the flow rate of the sampled portion to the flow rate of the fluid stream, in order to obtain substantially isokinetic sampling of the fluid stream.

Claim 81. (new): A method according to claim 80, further including the step of separating said sampled portion into a sampled liquid flow and a sampled gas flow, and wherein said step of measuring the sampled flow rate includes measuring the flow rate of the sampled liquid flow and the flow rate of the sampled gas flow.

Claim 82. (new): A method according to claim 80, wherein the step of measuring the total flow rate includes measuring the density of the fluid stream.

Claim 83. (new): A method according to claim 80, wherein the step of measuring the total flow rate includes measuring a differential pressure.

Claim 84. (new): A method according to claim 80, wherein said step of measuring the total flow rate is carried out continuously during the sampling process.

Claim 85. (new): A method according to claim 80, wherein the step of controlling the flow rate of the sampled portion is carried out continuously during the sampling process.

Claim 86. (new): A method according to claim 80, wherein the fluid stream is a feed from a well-head.

Claim 87. (new): A method according to claim 80, further including, prior to sampling the fluid stream, the step of conditioning the fluid stream.

Claim 88. (new): A method according to claim 87, wherein said step of conditioning the fluid stream includes the sub-steps of successively:

forming a liquid film at the wall of a pipe section which carries the fluid stream;
straightening the flow of at least the core of the fluid stream; and
shedding the liquid film into said core.

Claim 89. (new): A method according to claim 88, wherein the sub-step of forming the liquid film includes causing the fluid stream to swirl about the axis of the pipe section.

Claim 90. (new): Sampling apparatus for sampling a multi-phase fluid stream, comprising:

means for measuring the total flow rate Q of the fluid stream;
a sampling probe for sampling a portion of said fluid stream;
a meter for measuring the flow rate Q_s of said sampled portion; and
a controller adapted to control the flow rate of the sampled portion according to the ratio of the flow rate of the sampled portion to the total flow rate of the fluid stream, in order to obtain substantially isokinetic sampling of the fluid stream.

Claim 91. (new): Apparatus according claim 90, further including a separator for separating said sampled portion into a sampled liquid flow and a sampled gas flow; a

meter for measuring the flow rate of the sampled liquid flow; and a meter for measuring the flow rate of the sampled gas flow.

Claim 92. (new): Apparatus according to claim 91, wherein either or both of said meters are Coriolis flow meters.

Claim 93. (new): Apparatus according to claim 90, wherein the means for measuring the total flow rate includes a densitometer for measuring the density of the fluid stream.

Claim 94. (new): Apparatus according to claim 90, wherein the means for measuring the total flow rate includes a differential pressure sensor.

Claim 95. (new): Apparatus according to claim 94, wherein said differential pressure sensor is for use with a Venturi meter.

Claim 96. (new): Apparatus according to claim 94, wherein said differential pressure sensor is for use with a Pitot tube.

Claim 97. (new): Apparatus according to claim 90 further including, upstream of said sampling probe, a flow conditioner.

Claim 98. (new): Apparatus according to claim 97, wherein said flow conditioner is a pipe section including:

- a swirl inducing section;
- a flow straightener; and
- an orifice plate.

Claim 99. (new): Apparatus according to claim 98, wherein said swirl inducing section includes a tangential input to the pipe section.

Claim 100. (new): A method of sampling a multi-phase fluid stream comprising the steps of:

sampling, with a sampling probe, a portion of the multi-phase fluid stream;
measuring a differential pressure between the multi-phase fluid stream and the sampled portion; and
controlling a flow rate of the sampled portion using the measured differential pressure as a control signal in order to obtain substantially isokinetic sampling of the fluid stream.